

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 26 JUL 2006

WIPO PCT

Applicant's or agent's file reference 14054/GW	<b>FOR FURTHER ACTION</b>		See Form PCT/IPEA/416
International application No. <b>PCT/AU2005/000438</b>	International filing date ( <i>day/month/year</i> ) 24 March 2005	Priority date ( <i>day/month/year</i> ) 26 March 2004	
International Patent Classification (IPC) or national classification and IPC  Int. Cl.  <b>E06C 7/48 (2006.01)</b>			
Applicant  POLDMAA, Arvo et al			

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 3 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
  - a. ☒ (*sent to the applicant and to the International Bureau*) a total of 3 sheets, as follows:
    - ☒ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
    - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
  - b. ☐ (*sent to the International Bureau only*) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or table related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items:
 

<input checked="" type="checkbox"/> Box No. I	Basis of the report
<input type="checkbox"/> Box No. II	Priority
<input type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/> Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/> Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/> Box No. VI	Certain documents cited
<input type="checkbox"/> Box No. VII	Certain defects in the international application
<input type="checkbox"/> Box No. VIII	Certain observations on the international application

Date of submission of the demand 26 October 2005	Date of completion of this report 14 July 2006
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer  <b>JOHN HO</b> Telephone No. (02) 6283 2329

**Box No. I**      **Basis of the report**1. With regard to the **language**, this report is based on:

- ☒ The international application in the language in which it was filed
- ☐ A translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3(a) and 23.1 (b))
- ☐ publication of the international application (under Rule 12.4(a))
- ☐ international preliminary examination (Rules 55.2(a) and/or 55.3(a))

2. With regard to the **elements** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages **1-8** as originally filed/furnished
- pages\* received by this Authority on \_\_\_\_\_ with the letter of \_\_\_\_\_
- pages\* received by this Authority on \_\_\_\_\_ with the letter of \_\_\_\_\_
- ☒ the claims:
- pages as originally filed/furnished
- pages\* as amended (together with any statement) under Article 19
- pages\* **10-11** received by this Authority on **8 June 2006** with the letter of **8 June 2006**
- pages\* **12** received by this Authority on **3 July 2006** with the letter of **3 July 2006**
- ☒ the drawings:
- pages **1/7-7/7** as originally filed/furnished
- pages\* received by this Authority on \_\_\_\_\_ with the letter of \_\_\_\_\_
- pages\* received by this Authority on \_\_\_\_\_ with the letter of \_\_\_\_\_

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.3. ☒ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☒ the claims, pages **9**.
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to the sequence listing (*specify*): \_\_\_\_\_

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to the sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims <b>1-16</b>	<b>YES</b>
	Claims -	<b>NO</b>
Inventive step (IS)	Claims <b>1-16</b>	<b>YES</b>
	Claims -	<b>NO</b>
Industrial applicability (IA)	Claims <b>1-16</b>	<b>YES</b>
	Claims -	<b>NO</b>

**2. Citations and explanations (Rule 70.7)**

The following documents identified in the International Search Report have been considered for the purposes of this report:

D1 – US 5165501

The present invention relates to a bracket arrangement for removable attachment to the upper region of a ladder. Specifically, the bracket includes a pair of laterally spaced apart arms which are adjustably rotatable attached to the sides of the ladder and which extend not in a parallel arrangement from the ladder but diverge to provide inherent bracing to the ladder. The bracket also includes a cross member extending at least between the free ends or free end regions of each arm for placement against the roof of the building wherein the cross member is adapted to prevent the bracket and hence the ladder from moving sideways during use.

The features of the claimed invention are not disclosed by any of the cited documents.

The closest art, D1, refers to a ladder support attachment having a pair of upper arm assembly (111) and a pair of lower arm assembly (131) wherein the upper arm assembly is provided with a soft plate pad (121) for attachment or support on the roof. There is no disclosure of a pair of laterally spaced apart arms which are adjustably rotatable attached to the sides of the ladder and which extend not in a parallel arrangement from the ladder but diverge to provide inherent bracing to the ladder, nor is there any reference to the use of cross members adapted to prevent the bracket and hence the ladder from moving sideways during use.

Therefore the subject matter of these claims is new and meets the requirements of Article 33(2) of the PCT with regard to novelty.

Claims 1-16 also meet the criteria set out in PCT Article 33(3) with regard to the requirement of Inventive Step because the prior art does not obviously suggest to a person skilled in the art the use of a diverging arm and cross member to prevent sideways movement.

The invention defined in claims 1-16 is considered to meet the requirements of Industrial Applicability under Article 33 (4) of the PCT because it can be made by, or used in, industry.

## Claims

1. A bracket arrangement for removable attachment to the upper regions of a ladder, wherein the bracket has a pair of laterally spaced apart arms for adjustably rotatable attachment to respective sides of the ladder, the arms  
5 extending generally away from the ladder towards a roof of a building when the ladder is used against the side of said building to gain access to the roof, wherein the arms are so shaped, that they extend not in parallel arrangement from the ladder, but diverge, so as to provide inherent bracing by such geometric arrangement, and wherein the angle between the arms and the plane of the ladder  
10 is adjustable to suit varying conditions of use, the bracket having a pair of braces, each attached to respective sides of the ladder and adjustably rotatable about the point at which each is attached and extending from the ladder on respective sides thereof for locking each respective arm of the bracket so as to maintain each arm in predetermined angular relationship with respect to the  
15 plane of the ladder, the bracket having a cross member extending at least between the free ends or free end regions of each arm for placement against the roof of the building, wherein the cross member is adapted to prevent the bracket, and hence the ladder, moving sideways during use.
2. A bracket arrangement according to claim 1, wherein the end or end region of each brace remote from the ladder, is connected to the corresponding free end  
20 region of each respective arm, or is located elsewhere along the length of the arm, being connected thereto in adjustably rotatable fashion.
3. A bracket arrangement according to claim 2, wherein the angular relationship of each component and hence the overall geometry of the arrangement is  
25 determined by having one or more points for affixing each component to the other, along either any or all of the stile of the ladder, the arm, or the brace, to allow for adjustment as required.

4. A bracket arrangement according to any one of the preceding claims, wherein the means to prevent the bracket, and hence the ladder, moving sideways during use, and to protect the roof sheeting at the point of contact, are provided by the cross member having a replaceable anti-slip cover.
- 5 5. A bracket arrangement according to any one of the preceding claims, wherein the cross member is provided with means to allow it to be temporarily affixed to the roof by having a series of holes or slots therethrough, so as to allow a screw or other fixing means to be located therethrough for temporarily affixing the cross member to the roof.
- 10 6. A bracket arrangement according to any one of the preceding claims, wherein a further plate is provided extending at right angles to the said cross member which gives greater flexibility in finding suitable positions for attachment.
7. A bracket arrangement according to any one of the preceding claims, in which the pair of arms and the pair of braces associated therewith are affixed to the  
15 ladder with removable pins inserted through holes in the ends of the arms and braces where they are to be attached to the ladder, the pins passing through corresponding holes in the stiles forming the sides of the ladder.
8. A bracket arrangement according to claim 7 in which the pins are secured by being split pins or are affixed with cir-clips or the like.
- 20 9. A bracket arrangement according to any one of claims 1 to 6, in which the pair of arms and the pair of braces associated therewith are affixed to the ladder by means of clamps affixed either around the styles, or around the rungs, at least at the outer reaches thereof to avoid difficulty in otherwise using the rungs of the ladder.
- 25 10. A bracket arrangement according to any one of the preceding claims, in which the bracket is for use with ladders having hollow rungs, and there is provided a rod or hollow tube which extends between the respective ends or end regions of

the arms and braces where they to be attached to the ladder, and which is caused to pass through one of the hollow rungs of the ladder.

11. A bracket arrangement according to claim 10, in which one such rod or tube passes through one rung for connection to respective ends of the arms, whilst  
5 another passes through another rung, for connection to respective ends of the braces.
12. A bracket arrangement according to claim 10 or claim 11 in which suitable means for removably securing the end regions of the rods or hollow tubes to the respective arms or braces as the case may be is provided.
- 10 13. A bracket arrangement according to claim 12 in which the ends of the rods or tubes are threaded, either externally or internally to accommodate a nut in the former case, or a screw in the latter, for joining the rod or tube with the respective arms and braces.
14. A bracket arrangement according to claim 12, in which the means of removably  
15 interconnecting the rod or tube with the arms or braces is provided by means of an expanding bolt or screw arrangement, where tightening a bolt or screw causes material such as rubber or elastic material around the screw or bolt which is located in a hollow end of the rod or tube, to expand and engage in locking arrangement with the interior of the hollow portion.
- 20 15. A bracket arrangement according to any one of the preceding claims, in which the two arms and the braces are all identical, whilst the material for the cross member as well as the two rods or tubes required to connect each respective pair of arms and braces through the rungs of the ladder, is cut from a common length of material according to the size of ladder to which the bracket is to be fitted,  
25 thereby greatly reducing the cost of manufacture.
16. A bracket arrangement substantially as herein described with reference to the drawings.